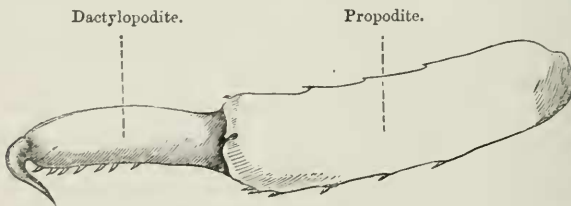


XXVI.—On the Mode in which the Young of the New-Zealand Astacidae attach themselves to the Mother. By J. WOOD-MASON.

A FEW days ago I received from Dr. Julius von Haast, Director of the Canterbury Museum, a small collection of crustaceans, amongst which is a specimen of remarkable interest. It is a female of *Astacoides zealandicus**, laden with young. On attempting to remove one of these from beneath the tail of the mother, I was surprised to find that it was firmly attached thereto, so firmly, indeed, that I had to exert considerable force in order to detach it, and even then it came away leaving its two hindmost pairs of walking-legs behind. The dactylopodite of each of these legs, on examination under a low power, was found to be provided at its extremity with a strongly hooked, exceedingly acute, movable claw, and on the lower edge at the end with six or seven sharp spines, against which the claw folds, and thus forms a very efficient prehensile arrangement. With these four legs, which are at this stage the longest, strongest, and most highly indurated of all the appendages, stretched straight backwards so as to be parallel with the postabdomen, the young crayfish hangs suspended head downwards from the postabdominal appendages of the mother. The young found thus attached measure, with the postabdomen extended, $7\frac{1}{2}$ millims., exclusive of the antennæ.

The accompanying figure represents the two terminal joints of one of the legs drawn by the aid of the camera lucida. I am not aware whether the young of *Astacus fluviatilis* attach themselves in this manner; certainly Rathke does not state that they do so in his admirable account of the development of the species.



The ova in the New-Zealand representatives of the genus

* = *Paranephrops setosus*, Hutton, Ann. & Mag. Nat. Hist. 1873, xii. p. 402.

*Astacoides** are large and few in number; and the young undergo no metamorphosis after quitting the egg. A large female of *Astacoides zealandicus* has but 380 eggs, measuring $2\frac{3}{4} \times 2\frac{1}{2}$ millims., under the tail; and these are attached to the appendages in the manner described by Lereboullet (in Ann. des Sc. Nat. sér. 4, vol. xiv. 1860) for *Astacus fluviatilis*.

XXVII.—*Descriptions and Figures of Deep-Sea Sponges and their Spicules, from the Atlantic Ocean, dredged up on board H.M.S. 'Porcupine,' chiefly in 1869 (concluded).* By H. J. CARTER, F.R.S. &c.

[Continued from p. 240.]

Hymenaphia vermiculata, Bk., var. *erecta*, n. sp. (Pl. XII. fig. 4, and Pl. XV. fig. 26, a, b.)

General form short, cylindrical, angular, club-shaped, becoming massive, lobed and lobulated, or compressed and expanding flabellately. Colour now yellowish white. Surface hirsute, even, reticulo-pitted, more or less furrowed; dermal structure reticulate. Pores in the sarcode tympanizing the interstices of the dermal reticulation. Vents scattered here and there on the surface. Internal structure consisting of fasciuli branching and subdividing obliquely from a central axis amidst the sarcode, which again is traversed by the branches of the excretory canal-system, that terminate for the most part in the furrows of the surface, which in their natural state are converted into canals by the dermal sarcode. Colour internally the same as that of the surface, or perhaps a little deeper. Spicules of one kind only, viz. skeleton-; no flesh-spicules. Skeleton-spicules of two forms, viz. :—1, very large, long and acuate, smooth, sharp-pointed, slightly curved towards the fixed end, which is the widest part of the spicule, but not inflated, 100- by $3\frac{1}{2}$ -1800ths inch (Pl. XV. fig. 26, a); 2, subskeleton-, a much smaller spicule, vermiculate, acerate, acuate, or cylindrical and obtuse at the ends, 45- by 1-1800th inch (fig. 26, b). The large acuates at their fixed ends are imbedded in a mass of interwoven vermiculates, which thus form fasciuli round them (Pl. XII. fig. 4, a, b), while their

* *Astacoides*, Guérin, Revue Zool. 1839, p. 109; *Paranephrops*, White, in Gray's Zool. Misc. 1842, p. 78, and Dielfenbach's 'New Zealand,' 1843, ii. p. 267.